

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

VERSUS TECHNOLOGY, INC.,)	
)	
Plaintiff,)	
)	
v.)	Civil Action No. 04-1231 (SLR)
)	
RADIANCE, INC.)	
)	
Defendant.)	"REDACTED VERSION"

**REPORT OF EXPECTED TESTIMONY OF WALTER S. LEIPOLD
PURSUANT TO FEDERAL RULE OF CIVIL PROCEDURE 26(a)(2)(B)**

I, Walter S. Leipold, make the following written report which includes my statement of opinions, and the basis and reasons for such opinions, that I may express at the trial of this action.

I. INTRODUCTION

I have been retained and asked by counsel for plaintiff ("Versus") to provide testimony on the capabilities of the Radianse system. In particular, I have been asked to review the source code of the Radianse system and compare its architecture and implementation to the inventions described in the following patents:

U.S. Patent No. 5,027,314 (the '314 patent)

U.S. Patent No. 5,572,195 (the '195 patent)

U.S. Patent No. 6,154,139 (the '139 patent)

U.S. Patent No. Re. 36,791 (the '791 patent)

II. BACKGROUND

I have the background and experience which are accurately set forth in my Curriculum Vitae which is attached as Exhibit A. In particular, as relevant to the issues discussed in this Report, my qualifications include a Master's degree in Computer Science, as well as twenty years of experience designing and implementing software applications in a variety of languages, including languages used in the Radianse system. I have also worked with embedded systems and microcontroller assembly languages. I have taught Junior- and Senior-level university courses in networking, software engineering, and the Java programming language at Penn State University and the University of Delaware.

III. MATERIALS REVIEWED AND CONSIDERED IN PREPARING THIS REPORT

I have reviewed and considered the materials identified in Exhibit B to this Report. In technical matters, I have relied on my experience, education, and the following standard reference textbooks:

- *Data and Computer Communications*, 6th edition, by William Stallings
- *Internetworking with TCP/IP, Volume I: Principles, Protocols, and Architectures*, 2nd edition, by Douglas E. Comer
- *Internetworking with TCP/IP, Volume II: Design, Implementation, and Internals*, by Douglas E. Comer and David L. Stevens

I expect I may continue to review the matters discussed in this Report and I reserve the right to supplement this list and this Report if I receive more information on the subjects addressed between now and the time I testify at trial. I also expect I may listen to or read testimony of witnesses who appear at trial live or via deposition, and to take that testimony and any associated exhibits into account when I testify about subjects stated in this Report.

penetrate walls, the location of the tag can be determined simply by noting which room a receiver that 'sees' the given tag is in. Obviously, receivers must be placed in every location where a person or an asset might be." While this quote refers to an IR-only system, to the extent that the Radianse system uses IR, it depends on a one-to-one relationship between receivers and areas.

In my opinion, the act of associating an area with a receiver via the Map Tool, adjusting the sensitivity of a receiver, or selecting the placement of a receiver to control the area monitored constitutes "each receiver being configured to receive TAG transmissions from an assigned area of predetermined size."

Issue #3

Radianse asserts that it does not infringe, among others, claims 1, 13 and 18 of the '195 patent because "Radianse does not use a variable-based protocol nor does it use object identifier variables" but rather that they utilize "a fixed communication protocol".

I assume for the purpose of this discussion that "object identifier variable" refers to the representation within the system of a tracked object's ID.

The phrase "variable-based protocol" has no particular technical meaning; I have never encountered this term outside of the '195 patent, and a literature search turned up no hits except for the '195 patent. I assume for the purpose of this discussion that the phrase describes any protocol which conveys variables, including protocols that convey the values of object identifier variables.

All protocols transmit variable data, whether in a fixed-length or variable-length messages. In the Radianse system, some transmissions are of fixed size; for example, LitePaks always transmit messages ("packets") exactly 80 bits in length, even though the content of the

V. EXHIBITS IN SUPPORT OF TRIAL TESTIMONY

At this time, I have not prepared any exhibits that may be used as a summary of or as support for my testimony at trial but reserve the right to do so should that be deemed appropriate.

This Report is signed this 30th day of September 2005.

A handwritten signature in black ink, appearing to read "W. J. R." followed by a stylized flourish or "Q3". The signature is written over a horizontal line.

EXHIBIT A
C.V. OF WALTER S. LEIPOLD III, P.E.

QUALIFICATIONS

- Proficient in systems analysis, software design and implementation, object design, mathematical modeling, and numerical analysis.
- Fluent in many programming languages, including Java, Python, C, C#, Perl, Fortran, C++, SQL, Visual Basic, Scheme, Pascal, Forth, Rexx, Lisp, and various assemblers.
- Experienced with relational database management systems including Microsoft SQL Server, Oracle, Sybase, Microsoft Access, and FoxPro.
- Experienced in system- and application-level software development under various operating systems including Windows NT/2000/XP, Unix/Linux, Macintosh, OpenVMS, and CMS.
- Conversant with the Unified Process and other software development methodologies, relational database design, software testing strategies, and project management.

EXPERIENCE

*Instructor, University of Delaware
(September '02 – present)*

Taught four semesters of CISC475 (Object-Oriented Software Engineering) and two semesters of CISC370 (Object-Oriented Programming with Java) in the Computer and Information Sciences department.

*Instructor, Penn State University (Delaware County Campus)
(January '02 – July '02)*

Taught two semesters of IST220 (Networking & Telecommunications) in the Information Science and Technology department.

*Principal Consultant, Applied Control Engineering, Newark, DE
(June '98 – present)*

Applied Control Engineering (ACE) is a process control and systems integrator that supports a large range of PLC, SCADA, HMI, and DCS systems for industrial, pharmaceutical, and biotech manufacturing.

Responsible for systems analysis, database design, client/server application development, and other technical tasks. Example projects are:

- Technical leader and principal developer for a system to configure and monitor multiple packaging lines in a pharmaceutical plant. The software was implemented in C#/.Net.
- Designed and implemented a distributed data-acquisition system for power plants. The application was written in Python and Java.
- Lead a six-person team in a year-long, Y2K-driven project to reengineer a number of control and database systems for a textile plant. Technologies used on the project included SQL Server, Visual Basic, Perl, IIS, and Wonderware.
- Designed and developed a number of client/server analysis and data entry applications using Microsoft SQL Server and Visual Basic or Microsoft Access.

*Principal Systems Engineer, CimQuest Incorporated, Newark, DE
(May '89 – June '98)*

CimQuest (formerly Cimtek) is a software and systems integration company that focuses on custom software, industrial real-time process control, and pharmaceutical system validation.

Responsible for systems analysis, software design/development, and project management for a wide range of projects including:

- For a pharmaceutical manufacturer, designed and implemented a custom data-acquisition application for microbial data monitoring using barcode-equipped handheld computers and PC-based data management and reporting software.
- For a manufacturer of consumer medical devices, designed and coordinated development of server software for a Class 3 medical device. The software consists of C and embedded SQL on an HP-UX server running Oracle 7, supporting a large number of PC clients.
- Software team leader on a two-year project, responsible for the design and implementation of a large VAX-based data acquisition, performance monitoring, and EPA-compliant emissions monitoring and reporting system for an electric utility's new combined-cycle gas turbine power plant. Total project codebase was in excess of 100,000 lines of custom Fortran code. Wrote and conducted a variety of training courses for plant personnel.

*Senior Engineering Analyst, Thiokol Corporation, Elkton, MD
(January '79 – May '89)*

Thiokol is a major producer of solid propellant rocket motors and gas generators.

Developed a number of engineering analysis software packages, including a solids modeling program for mass properties analysis, a suite of programs for the design, analysis, and fabrication of composite pressure vessels, an interactive grid generator and graphics postprocessor for finite element codes, and a 2D/3D finite difference code for modeling the diffusion of moisture through solid propellant.

Designed and analyzed the primary structures of a wide variety of rocket motors and gas generators, including the thrust vector control gas generators on all three stages of the Trident D5 missile and the TVA gas generator for the Peacekeeper missile. Conducted state-of-the-art nozzle thermostructural analyses for a variety of upper-stage rocket motors.

EDUCATION

1986 MS in Computer and Information Science, University of Delaware

1979 BME in Mechanical Engineering, University of Delaware

PROFESSIONAL

- Registered Professional Engineer (license number 6664) in Delaware.
- Member of ACM (Association for Computing Machinery).